



DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132-5190

5090
Ser 06CC.DG/1030
December 15, 2000

Mr. John Broderick
California Regional Water Quality Control Board
Santa Ana Region
Remedial Project Manager
3737 Main Street, Suite 500
Riverside, CA 92501-3339

Subj: REMEDIATION IMPLEMENTATION APPROACH AT INSTALLATION
RESTORATION PROGRAM (IRP) SITE 11, TRANSFORMER STORAGE AREA
MARINE CORPS AIR STATION (MCAS), EL TORO

Dear Mr. Broderick:

The purpose of the enclosure is to outline the proposed implementation approach to reevaluate the risk at Site 11. As discussed at the BCT meeting on 29 November 2000, the Navy is seeking regulatory agency concurrence on this reevaluation approach. Following concurrence, a more formal technical memorandum summarizing the results of the risk reevaluation will be submitted. The Navy anticipates that an explanation of significant differences or possibly a Record of Decision (ROD) Amendment will be required to appropriately document changes to the provisions in the ROD.

If the approach presented is acceptable to the BCT, the Navy proposes to use a similar approach to reevaluating risk at Sites 8 & 12. The reevaluation results will be presented in the technical memorandum that will be submitted for Site 11. The draft final ROD for these sites (8 & 12) would then be revised to reflect the updated risk based concentrations.

Your assistance in helping to identify a technically sound, and protective approach to these sites is greatly appreciated. If you have any questions please do not hesitate to call me at (619) 532 0784.

Sincerely,

A handwritten signature in black ink, appearing to read "Dean Gould", written over a large, stylized circular flourish.

DEAN GOULD
Base Realignment and Closure
Environmental Coordinator
By direction of the Commander

Enclosure: 1. MCAS EL Toro IRP Site 11 Proposed Reevaluation of Risk

Copy to: (w/encl)
Ms. Triss Chesney, DTSC
Mr. Glenn Kistner, U.S. EPA



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Ms. Triss Chesney
California Environmental Protection Agency
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4700

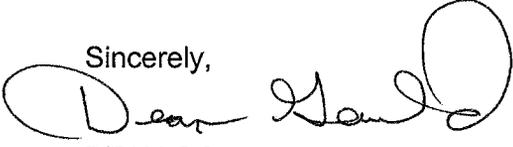
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Dear Ms Chesney:

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Mr. Glenn Kistner, U.S. EPA
Mr. John Broderick, Cal RWQCB, Santa Ana Region



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Mr. Glenn R. Kistner
U.S. Environmental Protection Agency
Region IX, (SFD 8-2)
Hazardous Waste Management Division
75 Hawthorne Street
San Francisco, CA 94105-3901

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Mr. John Broderick, Cal RWQCB, Santa Ana Region

IRP SITE 11 – PROPOSED REEVALUATION OF RISK

Introduction and Background Information

A baseline human health risk assessment was conducted for Site 11 as part of the Phase II Remedial Investigation (RI) in accordance with the *Final Risk Assessment Work Plan* (Bechtel National, Inc. [BNI] 1995). The results of this risk assessment were presented in the *Draft Final RI Report* (BNI 1997a).

The exposure assessment identified the following scenarios:

- Industrial scenario-Industrial workers exposed to the surface soil (0 to 2 feet below ground surface [bgs]) at areas of potential concern.
- Residential scenario-Children and adult residents exposed to shallow soil (0 to 10 feet bgs) at areas of potential concern.

The following pathways were identified for office/industrial workers and residents for exposure to chemicals of potential concern (COPCs) in the soil:

- Ingestion of surface soil,
- Dermal contact with surface soil, and
- Inhalation of vapors and particulates that have been released from surface soil.

The baseline excess lifetime cancer risk and the noncarcinogenic risk were quantified, and the principal risk driver(s) was identified. Table 1 presents the results.

Table 1: Site 11 Phase II RI Baseline Risk Assessment Results

Exposure Scenario	Unit 1	Unit 2
Excess Lifetime Cancer Risk		
Residential (0 to 10 feet bgs)	9.1E-05	5.9E-06
Industrial (0 to 2 feet bgs)	6.0E-05	4.5E-05
Noncancer Risk (Hazard Index)		
Residential (0 to 10 feet bgs)	4.5	0.30
Industrial (0 to 2 feet bgs)	1.1	0.83

Notes:

Principal (99%) risk driver is the Polychlorinated biphenyl (PCB), Aroclor 1260 for cancer and noncancer risk for both scenarios. Risk estimates are the same, based on both U.S. EPA and Cal-EPA parameters/factors.

The identification and evaluation of remedial alternatives was presented in the *Draft Phase II Feasibility Study* (BNI 1997b). Risk-based concentrations (RBCs) were calculated and used as remediation goals for screening purposes. For Aroclor 1260, the RBCs for industrial and residential scenarios were estimated to be 0.046 mg/kg and 0.038 mg/kg respectively.

The Proposed Plan (PP) and the Record of Decision (ROD) for Site 11 presented and documented the selected remedy based on the feasibility study (FS) and the use of RBCs as clean up goals.

IRP SITE 11 – PROPOSED REEVALUATION OF RISK

A *Remedial Action Strategy Technical Memorandum* (Southwest Division 1999) was prepared and submitted to the regulatory agencies outlining the remediation of polychlorinated biphenyl (PCB) impacted soils at Site 11. It proposed the use of U.S. EPA Region IX Preliminary Remediation Goal (PRG), 1998 update for PCBs (0.2 mg/kg) as the screening value for residual soil contamination. The California Department of Toxic Substances Control (DTSC) in a letter dated February 18, 2000 indicated that any modifications in cleanup goals and screening levels that exceed those specified in the ROD will require an amendment.

Proposed Risk Reevaluation

The risk for Site 11 needs to be updated to reflect the following:

- Additional data that was collected subsequent to the RI.
- Update the risk assessment by using current U.S. EPA/Cal-EPA toxicity information and exposure parameters.

Exposure-Point Concentration. The exposure-point concentrations (EPCs) that were calculated in the Phase II RI used both 95 percent upper confidence limits (UCLs) and maximum concentrations for the Site 11 units. The maximum concentration (2.8 mg/kg) of Aroclor 1260 was used as the exposure-point concentration at Unit 1 for both the industrial and residential land-use scenarios. For Unit 2, the maximum concentration (2.1 mg/kg) of Aroclor 1260 was used for the industrial scenario. Maximum values are typically used in cases where the data set is relatively small or there is a low frequency of detection. However, for the residential use scenario the EPC was based on the 95 percent UCL (0.18 mg/kg).

PCB soil analytical data that was collected subsequent to the RI will be used to recalculate the EPCs to update the risk estimation.

Update Toxicity Values and Exposure Parameters. The toxicity values that were used in the Phase II RI were obtained from the August 1996 table of PRGs published by the U.S. EPA Region IX and were confirmed by a review of the U.S. EPA Integrated Risk Information System (IRIS) database and the U.S. EPA Health Effects Assessment Summary Tables (HEAST). Cal-EPA toxicity values for PCBs do not differ from U.S. EPA values. The cancer slope factor (CSF) for PCBs has since been revised; the current PRG values incorporate the most recent CSF published by U.S. EPA in the calculation.

Exposure assumptions for adults and children exposed to soil used standard U.S. EPA default assumptions that were available at the time the risk assessment was conducted as part of the Phase II RI. Updated exposure factors that are used as default values in the calculation of PRGs have been published by U.S. EPA.

The values used in the Phase II RI baseline risk evaluation were compared to EPA Region IX Standard Default Factors/toxicity information (1996 and 1999) and are summarized in Table 2.

IRP SITE 11 – PROPOSED REEVALUATION OF RISK

Table 2: Comparison of Risk Assessment Parameters

Parameter	Unit	Value					
		EPA Region IX Default				Phase II RI	
		1996		1999		1997	
		Res.	Ind.	Res.	Ind.	Res.	Ind.
Exposure- Soil Dermal Contact							
Adherence Factor	Adult	mg/cm ²	0.2	0.07	0.2	1	1
	Child			0.2	-	1	-
Exposed Skin Area	Adult	cm ²	5000	5700	3300	5000	5000
	Child		2000	2800	-	2000	-
Dermal Absorption Factor (PCBs/organics)	Unitless	0.06/0.1	0.14/0.1		0.15		
Exposure Frequency	Days/year	350	250	350	250	350	250
Toxicity							
Cancer Slope Factor (PCBs)	mg/kg-day	7.7		2.0		7.7	

Based on the post RI analytical data and currently published toxicity values and exposure factors, the risk estimation needs to be updated. A technical memorandum presenting the results of this risk assessment and recommendations will be submitted for agency review.

If the revised estimated cancer risk exceeds 1×10^{-4} or the hazard index exceeds 1, then cleanup goals will be revised based on the updated risk-based concentrations. A new proposed plan or an explanation of significant differences and if necessary a ROD amendment will be prepared.

If the revised estimated cancer risk is between 1×10^{-4} and 1×10^{-6} and the hazard index is 1, then risk management options will be evaluated. A new proposed plan or an explanation of significant differences and if necessary a ROD amendment will be prepared, based on the risk management decisions.

If the revised estimated cancer risk is below 1×10^{-6} , and the hazard index does not exceed 1 then a new proposed plan will be prepared and no further action will be proposed. Upon the acceptance of the proposed plan, a ROD amendment will be prepared to document the residual risk at the site and the no further action status.